

Amendments to Claims

1. (original) A method for using a downhole vent-dump valve having a closed position and a venting position positioned below the standing valve assembly but above the stinger assembly of a reciprocating pump placed within the production tubing, an associated means for driving the pump, a wellhead and control valves comprising:

- a) preparing a chemical to be spotted in the production tubing;
- b) preparing makeup fluid;
- c) attaching said chemical to be spotted to the wellhead control valve;
- d) attaching said makeup fluid to the wellhead control valve;
- e) ceasing pumping operations;
- f) opening the control valve leading to said chemical to be spotted;
- g) drawing up on the pump drive means thereby opening the vent-dump valve and placing the vent-dump valve in the venting position thereby allowing said chemical to be spotted to be drawn into the well;
- h) closing the control valve leading to said chemical to be spotted as said chemical to be spotted is exhausted and opening the control valve leading to said makeup fluid;
- i) lowering the pump drive means thereby placing the vent-dump valve in the closed position as the supply of said makeup fluid is exhausted;
- j) closing the control valve leading to said makeup fluid; and,
- k) restoring the well to normal operating conditions.

2. (original) The method of claim 1 wherein step h becomes:

- h1) closing the control valve leading to said chemical to be spotted when the required quantity of chemical to be spotted has been drawn into the well and opening the control valve leading to said makeup fluid;

and wherein step i becomes:

- i1) lowering the pump drive means thereby placing the vent-dump valve in the closed position when the required quantity of makeup has been drawn into the well;

3. (amended) The method of claim 1 wherein steps a, c, f and g are omitted and wherein wherein step h becomes:

h1) drawing up on the pump drive means thereby opening the vent-dump valve and placing the vent-dump valve in the venting position thereby allowing said make-up fluid to be drawn into the well thereby clearing flower sand from about the stinger assembly;

4. (original) The method of claim 1 wherein air is used a makeup fluid, wherein steps a, c, f and g are omitted and wherein steps h through k become:

h1) drawing up on the pump drive means thereby opening the vent-dump valve and placing the vent-dump valve in a venting position thereby allowing air to be drawn into the production and allowing the produced fluid to flow back into the annulus thereby clearing flower sand from about the stinger assembly;

i1) waiting a predetermined time period to allow the hydrostatic head to dissipate in to the annulus;

j1) drawing harder on the pump drive means thereby freeing the pump from the hold-down; and,

k1) continuing service operations as needed.

5. (original) A method for spotting chemicals in production tubing using makeup fluid and a downhole vent-dump valve having a closed position and a venting position in a well having a pump and associated means for driving the pump, a wellhead and control valves comprising:

a) preparing the chemical to be spotted;

b) preparing the makeup fluid;

c) attaching both the chemical to be spotted and the makeup fluid to the wellhead control valves;

d) ceasing pumping operations;

e) opening the control valve leading to the chemical;

- f) drawing up on the pump drive means thereby opening the vent-dump valve and placing the vent-dump valve in the venting position thereby allowing the chemical to be drawn into the well;
- g) closing the control valve leading to chemical as the supply chemical is exhausted and opening the control valve leading to the makeup fluid;
- h) lowering the pump drive means thereby placing the vent-dump valve in the closed position as the supply of makeup fluid is exhausted;
- i) closing the control valve leading to makeup fluid; and,
- k) restoring the well to normal operating conditions.

6. (original) The method of claim 5 wherein step g becomes:

- g1) closing the control valve leading to said chemical to be spotted when the required quantity of chemical to be spotted has been drawn into the well and opening the control valve leading to said makeup fluid;

and wherein step h becomes:

- h1) lowering the pump drive means thereby placing the vent-dump valve in the closed position when the required quantity of makeup has been drawn into the well;

7. (withdrawn – for filing as a divisional application)

8. (withdrawn – for filing as a divisional application)

9. (withdrawn – for filing as a divisional application)

10. (withdrawn – for filing as a divisional application)

Request for Reconsideration

Reconsideration of the objection to the drawings, the rejection of claims 1 and 5 and the objections to claims 2-4 and 6 is respectfully requested.

The drawings has been amended to include the wellhead and control valves as claimed in the method claims. The specification has been amended to identify the surface valves shown in the amended drawing, Figure 1.

With all due respect to the Examiner, no amendments have been made to the claims as originally filed and rejected under 35 USC 103(a) for the following reasons.

The Examiner bases his rejection of claim 1, from which dependent claims 2 - 4 are based, on the prior art of Muller et al. With all due respect, Applicant believes that it should be pointed out to the Examiner that Muller discloses a device that is to be installed IN (or as a part of - but NOT within) a string of tubing extending from the surface in a wellbore. "The system includes a treatment tool 10 connected to one end of a one-piece, flexible tube 11 . . ." (column 4, lines 6-7). Simply stated, the Muller device is designed to be installed ON and run with a continuous flexible tubing string for treating a well. This means that its operation will be different to the instant device

The instant device is placed within the PRODUCTION tubing string and is designed to be received by a stinger or valve cage that in turn seats within the seating nipple at the bottom of a tubing string.

Thus the Muller device is different to the instant device which is designed to be run INSIDE the wellbore without the presence of PRODUCTION tubing: the instant device operates as part of the production tubing.

Now, with the knowledge of the great physical differences between the two devices and the difference in use of the two devices, let us examine the methods of operation of the Muller device and the instant device.

Muller requires that fluid be pumped INTO the flexible tubing (column 12, lines 42-44) after the wellbore is empty of any mechanical equipment; whereas, the instant device does not require fluid pressure (pumped fluid) to operate and does NOT require that the wellbore be empty of equipment.

Now let's turn to the operation of the Muller tool which is described in detail at column

13, lines 5-34. In summary, the tool is lowered to a point below the injection point (strata treatment – not wellbore piping and production tubing treatment as in the instant invention), raised slightly thereby causing the drag tool to slide down in place (there are no such elements in the instant device) while INCREASING THE FLUID FLOW. The instant device requires that pump operations cease. (See claim 1, step e “ceasing pumping operations” and claim 5, step d “ceasing pumping operations”)

Thus the claims AS WRITTEN certainly distinguish the methods of operation of the Muller device from the instant device.

Now turning to the Langseth et al. patent. This patent describes a method and apparatus for testing a well – not a method for treating well. Totally different art. Looking carefully at the Examiner’s comments that “Langseth et al. present makeup or kill fluid after a spotting chemical (col. 6, lines 53-65) . . . ” It is well known that “kill fluid” is used to prevent a blow out – that is the sudden release of high pressure fluid from the formation up the wellbore (annulus or tubing) and to the surface. In fact the Langseth disclosure states, “This ensures that the annulus 19 remains filled with kill fluid (and not a lighter fluid such as water) to prevent blow-outs up the annulus 19. Column 6, lines 63-65 – quoted by the Examiner.

Langseth et al. describe a Method for Testing a Well – in fact different zones in well. Langseth et al. do NOT discuss chemical spotting. The only fluid used in Langseth disclosure – as stated above – is for killing the well.

Careful examination of the instant application explains that the fluid introduced from the surface is for the purpose of spotting the chemical and making certain that the tubing does not fully drain. A completely different purpose. In fact, the method of the instant invention will NOT work in a high pressure well! The method would result in a blow-out!

The claim language in the preamble states clearly that the method is used in a producing well (actually one must understand that a well having a reciprocating pump is a low pressure producing well – clearly understood by one skilled in the art), within the PRODUCTION tubing, containing a wellhead and control valves plus an associated means for driving the pump.

The claim language clearly states that the method of drawing up on the PRODUCTION tubing opens the downhole valve. Compare this to Muller et al. in which the disclosure states that “such raising movement causes the drag valve 27 to move down along the tool to the closed

position illustrated in FIG. 10.” Column 13, lines 14-16. Compare the Muller action that CLOSES the valve to the Vann (instant application) that OPENS the valve. The Muller disclosure continues, “the operator then increases the force exerted by the grippers to increase the tension in the tube 11 to verify that the packers have in fact inflated. Since the packers lock the tool against movement along the well when they are inflated, increased tension will cause an increase in weight” Column 13, lines 28-33. Thus the method of Muller et al. do not teach or even indicate the method of the instant invention (Vann).

It is believed that the above amendments, explanations and arguments have properly traversed the objections of the Examiner. Again, reconsideration of the objections and rejections of the Examiner is respectfully requested.